

designated as mica schist, while the other, forming the centre of a synclinal, was designated simply as clay slate. The division in New Brunswick was similar, but in connection with both groups, fossils were obtained, those connected with the former, which was described as the "Dark Argillite Series," indicating a Silurian horizon, while those of the latter, though obscure, favored the supposition that they were Devonian. This latter view also received confirmation from the fact that these rocks would thus be occupying their natural position directly beneath the Carboniferous system, around both margins of which they come to the surface. No reason for doubting this determination, as regards the Devonian, has since arisen, but as regards the so-called dark argillites, while at first the view was entertained that they were wholly Upper Silurian, a question subsequently arose as to whether they might not also embrace still older or Cambro-Silurian strata. The rocks with reference to which, more particularly, this latter view was held are those which cross St. Croix River, north of Baring, and thence extend easterly through the parish of St. Stephen, in New Brunswick, to and beyond the settlement of Moore's Mills, consisting chiefly of fine-grained gneisses, micaceous, garnetiferous and staurolitic slates, black plumbaginous schists, actinolite schists and purple fine-grained micaceous sandstones; but eventually the same view was extended to the whole of the "dark argillite" series, except such portions as could be clearly shown, upon palaeontological evidence, to be Silurian. It was, however, at the same time stated that this arrangement was provisional, and it is still uncertain how much, if any, of the formation in question can really be regarded as older than the system last named. The facts which favor the general Upper Silurian age of the belt are those of its position directly beneath and in apparent conformity to the "pale argillites" or Devonian (the contacts, however, being vertical), and of a general resemblance, which it bears to the first-named group of rocks, as developed in some portions of King's County, New Brunswick, and around Passamaquoddy Bay. On the other hand, the resemblance to the rocks which occupy a similar position on either side of the northern granite axis is still more marked; while in this latter case, it has not only been shown that the argillites in question are unconformably covered by fossiliferous Upper Silurian beds, but in places themselves contain fossils indicative of a Lower Silurian horizon. That the rocks of these several dark argillite belts, as seen (1) north of Baring and St. Stephen, (2) through the parish of Prince William, and (3) in Canterbury, New Brunswick, are essentially alike, would probably be readily admitted by any one who directly compared them, and the view that they are the same formation brought up by successive geanticlinals has been taken alike by Gresner, Robb, Hitchcock, Hind, Logan, Ells and the present author. All these authorities have also regarded them in the main as older than Silurian, the two authorities first named considering them (together with the pale argillites or Devonian) as of Cambrian age, while by Hind and Logan they have been compared to the so-called Quebec Group. It should not however, be overlooked that at one point in New Brunswick (Rocky Brook, on Nashwaak River) in the very heart of the dark argillite belt, and at but a short distance from the granite, fossils indicative of a Lower Helderberg horizon were, some years ago, found by the late Chas. Robb, and more recently, in the same belt, but in its less altered portions, fossils which appear to be of Devonian type have been obtained, a few miles north of Fredericton, by Mr. W. T. H. Reed. Hence the same question arises, here as nearer the coast, whether, upon the evidence of these fossils, the age which they indicate is to be regarded as that of the entire belt in which they are obtained, or of any